



## In the United States Patent and Trademark Office

Applicant(s): Jun F. Zheng  
Serial Number: 10/008,922  
Appn. Filed: 12/07/2001  
Appn. Title: 1XN Fanout Waveguide Photodetector  
Examiner/AU: Akm E. Ullah/2874  
Current Status: Non-Final Action Mailed

Mailed: 06/08/2004  
At: Sunnyvale, CA

### PROTEST

Assistant Commissioner for Patents  
Washington, District of Columbia 20231  
Attn: Director of Technology Center 2870

Sir:

I would like to submit a **"PROTEST UNDER 37 CFR 1.29(a)"** for the subject patent application cited above. In support of the protest, I attach the following documents to the current correspondence:

- 1) copy of letter of complaint prepared by protestant on June 3, 2004 and mailed to the examiner on June 6, 2004
- 2) copy of email correspondence from the applicant, Jun F. Zheng on January 17, 2001
- 3) copy of patent 5,416,861, by Seungug Koh et al., issue date: May 16, 1995 and application date: April 29, 1994
- 4) copy of journal article "Synchronous global clock distribution on multichip modules using optical waveguide", by Seungug Koh et al., Optical Engineering, Vol 33(5), pp1587 - 1595, May 1994

Here the first document addresses the protestant's concern, which has been delivered to the USPTO examiner informally as a letter of complaint. The second document details the email correspondence from the patent applicant to the protestant in January 2001, where the applicant acknowledges the prior art by the protestant disclosed in a journal article "Synchronous global clock distribution on multichip module using optical waveguide". The third document is a copy of the issued patent by the protestant, which was applied on April 29, 1994 and issued on May 16, 1995. And the fourth document is a copy of journal article that the patent applicant cited in his email correspondence to the protestant.

### Detailed Description of the Situation:

Recently I came across with a technical article by Intel: "On-Chip Optical Interconnect", which discusses about the optical clock distribution network for the high-speed ICs. This article was published in the May 2004 issue of Intel Technology Journal and it is available at <http://developer.intel.com/technology/itj/2004/volume08issue02/>. Upon reading the article, I instantly recognized Dr. Jun-Fei Zheng, who is one of the authors. In January 2001, Dr. Zheng approached me by introducing himself as an Intel researcher assigned to MIT for optical interconnect R&D activities and he asked about my latest work on the optical clock distribution using H-tree optical waveguide networks. He informed me that he studied my journal article "Synchronous global clock distribution on multichip module using optical waveguide" very closely and he also believed that my work is very relevant to the on-chip clock distribution network for Intel's future microprocessors.

During the first meeting with him in January 2001, I have given him a printed copy of my patent 5,416,861, a relevant and prior-art US patent, as well as discussing about my journal article. And, over the past few years, I have met him on several occasions and provided him with my insight and advice on the subject matter too. However, after reading Intel's article, I have learned that Intel has been following my work very closely without referencing it and I got very curious about Intel's IP portfolio for the optical interconnect technologies. So I have searched for the issued and pending patents for optical clock distribution technologies by Intel and discovered that Intel has several patents on the optical clock distribution network technologies. In these patents, both USPTO examiners and Intel inventors have cited my subject patent on various occasions. And the followings are the list of Intel's issued patents, which are referencing the issued patent 5,416,861. From this I am quite sure that Intel is clearly aware of my patent over the years as a relevant prior art for the optical interconnect technologies.

PAT. NO.	Title	Appl Date	Issue Date	Assignee
6,661,943	Fiber-free optical interconnect system for chip-to-chip signaling	30-Jan-02	9-Dec-03	Intel Corporation (Santa Clara, CA)
6,351,576	Optical clocking distribution using diffractive metal mirrors and metal via waveguides	23-Dec-99	26-Feb-02	Intel Corporation (Santa Clara, CA)
6,125,217	Clock distribution network	26-Jun-98	26-Sep-00	Intel Corporation (Santa Clara, CA)
5,889,903	Method and apparatus for distributing an optical clock in an integrated circuit	14-May-98	30-Mar-99	Intel Corporation (Santa Clara, CA)
5,812,708	Method and apparatus for distributing an optical clock in an integrated circuit	31-Dec-96	22-Sep-98	Intel Corporation (Santa Clara, CA)

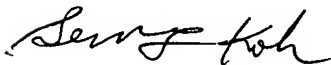
During the search for Intel's pending patents for optical interconnect technologies, Dr. Zheng's patent application ( application number 10/008,922 ) came to my attention. And his published documents immediately surprised me for the following reasons. In his specification, he has illustrated a 1x16 H-tree optical clock distribution in FIG 13, which is almost identical to FIG 1 and 2 of patent 5,416,861. He also claimed optoelectronic systems and optoelectronic clocking system in claim 30 – 35, which is identical or substantially identical to the claims of the issued patent 5,416,861. Furthermore, there exists a **"violation of the duty of disclosure under 37 CFR 1.56"**, because the applicant failed to reference the issued patent 5,416,861 or journal article "Synchronous global clock distribution on multichip module using optical waveguide" in the published IDC or patent specification. In addition, the applicant, as evidenced in the current protest, has known these prior arts over the years.

For the reasons described above, the protestant respectfully request the USPTO to incorporate the attached issued patent, journal article, and other available prior art in considering the patentability of the subject patent application. Furthermore, if the disputed claims of patent application are determined to be in the allowable forms, the protestant also respectfully requests the USPTO to consider a patent interference between the issued patent 5,416,861 and the subject patent application.

### REMARKS - General

By the above protest, the protestant has tried to provide the information as thorough as possible by examining the publicly available documents like issued patents, journal article, patent application publication, and patent file history data. But, it is acknowledged that the protestant does not have the access to the up-to-date and privileged patent prosecution information between the applicant and patent examiner, which prevents the inclusion of such information into the current protest. However the current protest is believed to be accurate and truthful to the best knowledge available to the protestant.

Very respectfully,



Seungug Koh

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